Page 56, line 2, delete "CCCCCCATCTCCACTTCCTCCCCCTCGAGTGATC" and insert

--CCCCCCATCTCCACTTCCTCCCCCTCGAGTGTAC--;

line 3, delete "AGGGTACCACTATGGGGTCAGCGCCTGTGAGGGATG" and insert

--AGGGTACCACTATGGGGTCAGCGCCTGTGAGGGATGT--;

line 7, delete "GACGATCTCACAGAGAAGATCCGAAAAGCTCACCAGGAAACTTTCCCTTCACTCTCG" and insert

--GACGATCTCACAGAGAAGATCCGAAAAGCTCACCAGGAAACTTTCCCTTCACTCTGC--.

Page 58, line 2, delete "of";

line 3, after "coding" insert --,--, delete "on" and insert --upon--,

line 4, after "host" insert --,--.

IN THE CLAIMS:

Please cancel claim 38 without prejudice or disclaimer and amend the following claims:

1. (Twice Amended) A cloned DNA sequence of *hap* gene, wherein the sequence has the formula:

ATGTTTGACTGTATGGATGTTCTGTCAGTGAGTCCTGGGCAAATCCTGGATTTCTACACTGCGAGT
CCGTCTTCCTGCATGCTCCAGGAGAAAGCTCTCAAAGCATGCTTCAGTGGATTGACCCAAACCGAA
TGGCAGCATCGGCACACTGCTCAATCAATTGAAACACAGAGCACCAGCTCTGAGGAACTCGTCCCA
AGCCCCCCATCTCCACTTCCTCCCCCTCGAGTG[AT]TACAAACCCTGCTTCGTCTGCCAGGACAAA
TCA
TCAGGGTACCACTATGGGGTCAGCGCCTGTGAGGGATGTAAGGGCTTTTTCCGCAGAAGTATTCAGA
AGAATATGATTTACACTTGTCACCGAGATAAGAACTGTGTTATTAATAAAGTCACCAGGAATCGAT
GCCAATACTGTCGACTCCAGAAGTGCTTTGAAGTGGGAATGTCCAAAGAATCTGTCAGGAATGACA

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GGAACAAGAAAAAGAAGGAGACTTCGAAGCAAGAATGCACAGAGAGCTATGAAATGACAGCTGAGT
TGGACGATCTCACAGAGAAGATCCGAAAAGCTCACCAGGAAACTTTCCCTTCACTCT[CG]GCCAGC
TGG
GTAAATACACCACGAATTCCAGTGCTGACCATCGAGTCCGACTGGACCTGGGCCTCTGGGACAAAT
TCAGTGAACTGGCCACCAAGTGCATTATTAAGATCGTGGAGTTTGCTAAACGTCTGCCTGGTTTCA
CTGGCTTGACCATCGCAGACCAAATTACCCTGCTGAAGGCCGCCTGCCTGGACATCCTGATTCTTA
GAATTTGCACCAGGTATACCCCAGAACAAGACACCATGACTTTCTCAGACGGCCTTACCCTAAATC
GAACTCAGATGCACAATGCTGGATTTGGTCCTCTGACTGACCTTGTGTTCACCTTTGCCAACCAGC
TCCTGCCTTTGGAAATGGATGACACAGAAACAGGCCTTCTCAGTGCCATCTGCTTAATCTGTGGAG
ACCGCCAGGACCTTGAGGAACCGACAAAAGTAGATAAGCTACAAGAACCATTGCTGGAAGCACTAA
AAATTTATATCAGAAAAAGACGACCCAGCAAGCCTCACATGTTTCCAAAGATCTTAATGAAAATCA
CAGATCTCCGTAGCATCAGTGCTAAAGGTGCAGAGCGTGTAATTACCTTGAAAATGGAAATTCCTG
GATCAATGCCACCTCTCATTCAAGAAATGATGGAGAATTCTGAAGGACATGAACCCTTGACCCCAA
GTTCAAGTGGGAACACAGCAGAGCACAGTCCTAGCATCTCACCCAGCTCAGTGGAAAACAGTGGGG
TCAGTCAGTCACCACTCGTGCAATAA,

wherein said DNA is in an isolated and purified form and encodes a retinoic acid receptor comprising a DNA binding domain and a hormone binding domain.

57. (Amended) A [cloned] DNA <u>fragment comprising a portion of a DNA</u> sequence<u>, wherein the DNA sequence encodes</u> [encoding] a polypeptide of *hap* gene, [wherein] <u>and</u> the DNA [sequence has a formula] <u>fragment comprises a nucleotide sequence</u> selected from the group consisting of <u>sequences</u>:

(a) GTCAGGAATGACAGGAACAAGAAAAAGAAGGAGACTTCGAAGCAAGAATGC;

(b) GCTGAGTTGGA[C]<u>G</u>ATCTCACAGAGAAGATCCGA;

(c) GGGGTCA[C]<u>G</u>TCAGTCACCACTCGTGCAA;

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(d) AATGACAGGAACAAGAAAAAGAAGGAGACT;

(e) ATGTTTGACTGTATGGATGTTCTGTCAGTGAGTCCTGGGCAAATCCT[C]GGATTT
CTACACTGCG
AGTCCGTCTTCCTGCATGCTCCAGGAGAAAGCTCTCAAAGCATGCTTCAGTGGATTGACCCAAACCG
GAA
TGGCAGCATCGGCACACTGCTCAATCA; and

(f) CATGAACCCTTGACCCCAAGTTCAAGTGGGAACACAGCAGAGCACA[C]GTCCTAG
CATCTCACCC
AGCTCAGTGGAAAACAGTGGGGTCA[C]GTCAGTCACCACTCGTGCAA,

wherein sequence (a) encodes amino acid residues 151 to 167, sequence (b) encodes amino acid residues 175 to 185, sequence (c) encodes amino acid residues 440 to 448, sequence (d) encodes amino acid residues 153 to 162, sequence (e) encodes amino acid residues 1 to 53, and sequence (f) encodes amino acid residues 413 to 448 of the mature retinoic acid receptor-β polypeptide.

4. (Twice Amended) A DNA [sequence] fragment as claimed in claim 57, wherein the nucleotide sequence [has the formula: GTCAGGAATGACAGGAACAAGAAAAAGAAGGAGACTTCGAAGCAAGAATGC] is sequence (a).

5. (Twice Amended) A DNA [sequence] fragment as claimed in claim 57, wherein the nucleotide sequence [has the formula: GCTGAGTTGGACCATCTCACAGAGAAGATCCGA] is sequence (b).

6. (Twice Amended) A DNA [sequence] fragment as claimed in claim 57, wherein the nucleotide sequence [has the formula: GGGGTCACTCAGTCACCACTCGTGCAA] is sequence (c).

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7. (Twice Amended) A DNA [sequence] fragment as claimed in claim 57, wherein the nucleotide sequence [has the formula: AATGACAGGAACAAGAAAAAGAAGGAGACT] is sequence (d).

8. (Twice Amended) A DNA [sequence] fragment as claimed in claim 57, wherein the nucleotide sequence [has the formula: ATGTTTGACTGTATGGATGTTCTGTCAGTGAGTCCTGGGCAAATCCTCGATTTCTACACTGCGAGTC TCTTCCTGCATGCTCCAGGAGAAAGCTCTCAAAGCATGCTTCAGTGGATTGACCCAAACCGAATGGC CATCGGCACACTGCTCAATCA] is sequence (e).

9. (Twice Amended) A DNA [sequence] fragment as claimed in claim 57, wherein the nucleotide sequence [has the formula: CATGAACCCTTGACCCCAAGTTCAAGTGGGAACACAGCAGAGCACACTCCTAGCATCTCACCCAGCT GTGGAAAACAGTGGGGTCACTCAGTCACCACTCGTGCAA] is sequence (f).

Claim 39, line 1, before "DNA" insert --A--, delete "38" and insert --59--.

Claim 40, line 1, before "DNA" insert --A--.

Claim 41, line 2, delete "38" and insert --59--.

Claim 42, line 2, delete "38" and insert --59--.

58. (Amended) A method for identifying a ligand [to] for a retinoic acid receptor, said method comprising:

(A) isolating DNA sequences having a retinoic acid receptor ligand-binding domain and a DNA-binding domain;

(B) constructing a chimeric gene by substituting operative portions of the DNA-binding domain region of the DNA sequence of step (A) with operative portions of a DNA-binding domain region from human oestrogen receptor;

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(C) introducing into a suitable receptor-deficient host cell: (1) the chimeric gene from step (B), and (2) [the oestrogen-responsive] a reporter gene [vit-tk-CAT] functionally linked to an operative hormone response element, wherein the hormone response element is capable of being activated by the DNA-binding domain region of the receptor protein encoded by the chimeric gene of step (B);

(D) challenging the transfected host cell from step (C) with at least one compound to be evaluated for ligand binding activity with a chimeric receptor protein encoded by the chimeric gene of step (B);

(E) monitoring induction of the reporter gene;

(F) identifying as a functional ligand(s) that ligand(s) which is capable of inducing production of the protein product of the reporter gene.

Please add the following new claim:

--59. A DNA sequence comprising a nucleotide sequence:

CCCATGC
GAGCTGTTTGAGGACTGGGATGCCGAGAACGCGAGCGATCCGAGCAGGGTTTGTCTGGGCACCGT
ATGTTTGACTGTATGGATGTTCTGTCAGTGAGTCCTGGGCAAATCCTGGATTTCTACACTGCGAGT
CC
GTCTTCCTGCATGCTCCAGGAGAAAGCTCTCAAAGCATGCTTCAGTGGATTGACCCAAACCGAATG
GCAGCATCGGCACACTGCTCAATCAATTGAAACACAGAGCACCAGCTCTGAGGAACTCGTCCCAAG
CCCCCCATCTCCACTTCCTCCCCCTCGAGTGTACAAACCCTGCTTCGTCTGCCAGGACAAATCATC
AGGGTACCACTATGGGGTCAGCGCCTGTGAGGGATGTAAGGGCTTTTTCCGCAGAAGTATTCAGAAG
AATATGATTTACACTTGTCACCGAGATAAGAACTGTGTTATTAATAAAGTCACCAGGAATCGATCG
CAATACTGTCGACTCCAGAAGTGCTTTGAAGTGGGAATGTCCAAAGAATCTGTCAGGAATGACAGG

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